

# ULTRASOUND ERGONOMICS

## CHECKLIST FOR SCANNING AND OBSERVING COLLEAGUES

### PATIENT UP CLOSE



Reduces arm abduction (optimal  $<30^\circ$ )

### CHAIR, COUCH AND MACHINE KEYBOARD AT CORRECT HEIGHT



- Forearm horizontal
- Neck relaxed (top of monitor in position to reduce neck extension)

### POSITION CHAIR SO THAT SPINE IS STRAIGHT

A slight tilt forward on the chair can reduce slouch

### PATIENT POSITION IN RELATION TO COUCH AND MACHINE



- Humerus vertical and close to body
- Check shoulder/humerus not behind the body or too far forward. Both may cause shoulder strain

### SPINE STRAIGHT

- No twisting
- No leaning

### NECK IN ALIGNMENT

Neutral (often tilts to the side when scanning)

### TRANSDUCER GRIP



- Use a power grip or modified power grip
- NO white knuckles
- Keep pressure to a minimum when scanning
- As a general rule, do NOT push or suggest others do so unless clinically required
- Check fingers not tucked under transducer or sticking out – all fingers should be involved in the grip

### WRIST MOVEMENTS

- Neutral wrist, not deviated too much laterally ( $<25^\circ$ )
- Not flexed either way ( $<15^\circ$ )

### BE AWARE OF NON-SCANNING HAND AND TAKE MICRO-BREAKS

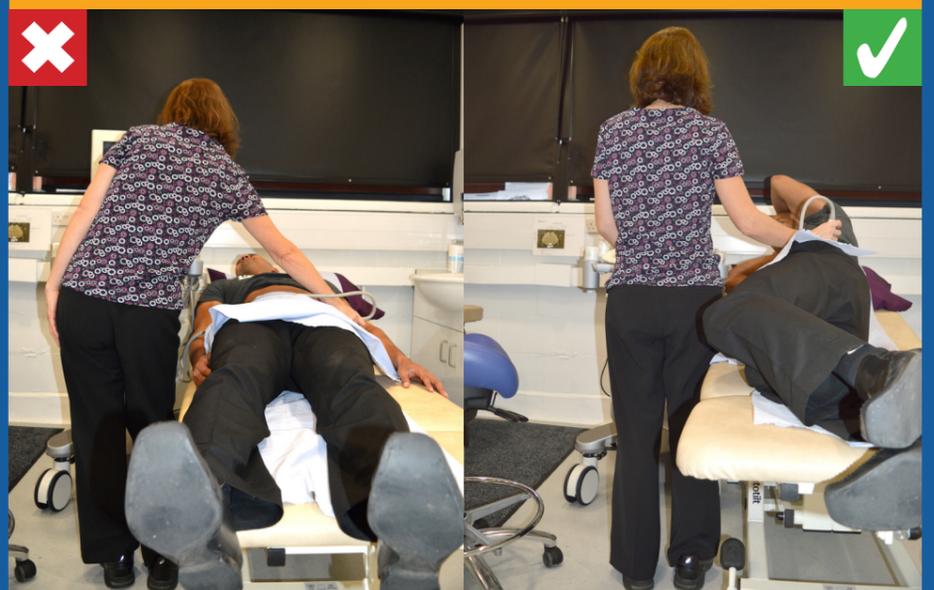


- Don't over-reach
- Keep machine close to you
- No neck twisting. Use a slave monitor or show the screen at the beginning and end of the scan
- Take micro-breaks. Rest scanning hand when measuring and rest non-scanning arm if extending  $>30\text{cm}$  to reach the controls

### DON'T STARE FIXEDLY AT THE MONITOR

Blink regularly throughout the scan

### STANDING



- Try standing if good ergonomic posture is not easy to achieve
- If standing: balance weight between both feet and have couch at the appropriate height



**SoR**  
THE SOCIETY OF  
RADIOGRAPHERS

Written and compiled by Gill Harrison,  
Associate Professor, Ultrasound Programme Director and  
Lead for Teaching Excellence at City, University of London

[www.sor.org](http://www.sor.org)